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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY

**Imagineering Enterprises, Inc.
1302 West Sample Street
South Bend, Indiana 46619-3894**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F 141-14152-00090	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: November 18, 2002 Expiration Date: November 18, 2007

TABLE OF CONTENTS

SECTION A SOURCE SUMMARY

- A.1 General Information [326 IAC 2-8-3(b)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]
- A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]
- A.4 FESOP Applicability [326 IAC 2-8-2]
- A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

SECTION B GENERAL CONDITIONS

- B.1 Permit No Defense [IC 13]
- B.2 Definitions [326 IAC 2-8-1]
- B.3 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]
- B.4 Enforceability [326 IAC 2-8-6]
- B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]
- B.6 Severability [326 IAC 2-8-4(4)]
- B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
- B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5 (a)(4)]
- B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]
- B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]
- B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]
- B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]
- B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]
- B.14 Emergency Provisions [326 IAC 2-8-12]
- B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]
- B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]
- B.17 Permit Renewal [326 IAC 2-8-3(h)]
- B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]
- B.19 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]
- B.20 Permit Revision Requirement [326 IAC 2-8-11.1]
- B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]
- B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]
- B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [326 IAC 2-1.1-7]

SECTION C SOURCE OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]
- C.2 Overall Source Limit [326 IAC 2-8] [326 IAC 2-2]
- C.3 Opacity [326 IAC 5-1]
- C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]
- C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]
- C.6 Fugitive Dust Emissions [326 IAC 6-4]
- C.7 Operation of Equipment [326 IAC 2-8-5(a)(4)]
- C.8 Stack Height [326 IAC 1-7]
- C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61 Subpart M]

Testing Requirements [326 IAC 2-8-4(3)]

- C.10 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]

C.11 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60][40 CFR 63]

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports
[326 IAC 2-8-4, 5]

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4, 5]

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.17 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 FACILITY OPERATION CONDITIONS: Coating and cleaning operations

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 8-6-2(a)] [326 IAC 8-1-1] [326 IAC 8-2]

D.1.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4]

D.1.3 Particulate Matter - 10 microns (PM₁₀) [326 IAC 2-8-4]

D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-2] [326 IAC 8-3-5]

D.1.5 Particulate Matter (PM) [40 CFR 52, Subpart P]

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

D.1.7 Particulate [326 IAC 6-3-2(d)]

Compliance Determination Requirements

D.1.8 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-2]
[326 IAC 8-1-4]

D.1.9 VOC Emissions

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.10 Monitoring

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.11 Record Keeping Requirements

D.1.12 Reporting Requirements

SECTION D.2 FACILITY OPERATION CONDITIONS: Blasting Process

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate [326 IAC 6-3-2]

D.2.2 Particulate Matter - 10 microns (PM₁₀) [326 IAC 2-8-4]

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

D.2.4 Particulate Control (PM and PM₁₀)

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.5 Visible Emissions Notations

D.2.6 Baghouse Inspections

D.2.7 Broken or Failed Bag Detection

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.8 Record Keeping Requirements

SECTION D.3 FACILITY OPERATION CONDITIONS: Insignificant Activities

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate [326 IAC 6-2-4]

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

D.3.3 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4]

Compliance Determination Requirements

D.3.4 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs)

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

There are no applicable compliance monitoring conditions for these facilities.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.5 Record Keeping Requirement

D.3.6 Reporting Requirements

Certification

Emergency Occurrence Report

Monthly Reports

Quarterly Reports

Quarterly Deviation and Compliance Monitoring Report

SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary metal automotive and general commercial transportation finishing and coating source.

Authorized Individual:	F. James Hammer
Source Address:	1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address:	1302 West Sample Street, South Bend, Indiana 46619-3895
General Source Phone Number:	(574) 287-2941
SIC Code:	3471/3479
County Location:	St. Joseph
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (a) Two (2) paint booths, identified as K-1 and K-2, constructed in 1977 and 1978, respectively, equipped with air atomization spray applicators and dry filters for overspray control, exhausted through Ducts G and F, capacity: 27.0 pounds of coatings per hour, total.
- (b) One (1) centrifuge dip and spin dry film coating machine, also referred to as bulk dip and spin parts coater, identified as L-2, constructed in January 1997 and exhausted through Ducts J and E, capacity: 5 gallons.
- (c) One (1) Passivation Line, also described as Conversion Coating Line #3, exhausting through Stacks B and V, consisting of the following:
 - (1) Seven (7) passivation tanks, identified as C-17 through C-23, capacity: 43 gallons, each;
 - (2) One (1) cold cleaner immersion tank, identified as C-24, constructed prior to February 1993, using Isopropyl Alcohol, capacity: 8 gallons;
 - (3) Two (2) passivation tanks, identified as C-27 and C-28, capacity: 34 gallons, each;
 - (4) One (1) cold cleaner tank, identified as C-29, constructed in 2000, operating in series with C-24, using isopropyl alcohol, capacity: 8 gallons.
- (d) Conversion Coating Line #1, which is a phosphate coating line and a manual etch line, identified as C-12, C-13, C-14, C-15 and C-16, exhausted through Stack W.

- (e) Conversion Coating Line #2, which is a phosphate coating line, identified as C-2 through C-8 and C-25 exhausted through Ducts T and U.
- (f) Conversion Coating Line #4, which is a phosphate coating line, identified as F-1 through F-9, exhausted through Stack A.
- (g) Plating Line #1, for electroless nickel plating, identified as prep tanks E-1 through E-8, E-21, and F-10, with E-1 exhausted through Stack A, plating tanks E-2 through E-8 exhausted through Stack D, and E-21 and F-10 exhausted through Stacks Z and AA.
- (h) Plating Line #2, for electroless nickel plating, identified as E-9 through E-13, E-15 through E-20, E-22 through E-27, E-30 and E-31, exhausted through Stack C.
- (i) One (1) non-destructive testing area, consisting of eight (8) penetrant tanks, identified as J-1 through J-7 and J-14, one (1) ZL-4C penetrant tank, identified as J-11, and one (1) nitric-hydrofluoric tank, identified as J-13.
- (j) Six (6) portable cold cleaner degreasers, identified as I-3 through I-8, constructed prior to March 1993, using methyl ethyl ketone (MEK), capacity: less than 13 gallons, each.
- (k) One (1) immersion solvent cleaning tank, identified as I-13, constructed in 2001, using methyl ethyl ketone (MEK), capacity: 8 gallons.
- (l) One (1) portable immersion cold cleaner tank, identified as I-14, constructed in 2000, using isopropyl alcohol, capacity: 6 gallons.
- (m) Four (4) blaster booths, two (2) using aluminum oxide, one (1) using glass, vermiculite or an equivalent media, and one (1) using glass, plastic, aluminum oxide or an equivalent media, and one (1) tumble blaster, using aluminum oxide beads, collectively identified as J-9, one (1) of the blaster booths is a wet blaster and the others are equipped with small baghouse dust collectors exhausting into the room; all of the blaster booths are equipped with a common baghouse dust collector exhausted through Vent H, maximum capacity: 400 pounds of parts and 0.7 pounds of blasting media per hour, total.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:
 - (1) One (1) boiler, identified as B-1, constructed in 1997, fired by natural gas, capacity: 2.07 million British thermal units per hour. [326 IAC 6-2-4]
 - (2) One (1) makeup air unit, identified as M-2, constructed in 1997, fired by natural gas, capacity: 4.8 million British thermal units per hour.
 - (3) One (1) water heater, identified as J-10, exhausting through Stack Y, capacity: 0.150 million British thermal units per hour.
 - (4) Two (2) space heaters, identified as N-1 and N-2, capacity: 0.175 million British thermal units per hour, each.

- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour, including one (1) emergency heating unit operating on liquid propane, identified as I-15, capacity: 0.15 million British thermal units per hour.
- (c) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons. Inorganic baths used for make-ups and temporary storage to facilitate changes and material handling.
- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (e) Closed loop heating and cooling systems.
- (f) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume.
- (g) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (h) Paved and unpaved roads and parking lots with public access.
- (i) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (j) Filter or coalescer media changeout.
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (l) One (1) electric furnace, identified as K-5, with a capacity of 0.5 cubic feet.
- (m) One (1) ultrasonic cleaner, identified as I-1.
- (n) One (1) electric spin dryer, identified as I-12.
- (o) One (1) oil tank in the parts cleaning area, identified as J-12, used for applying oil to parts, capacity: 68 gallons, using no more than 0.555 pounds of mineral spirits and oil per hour. [326 IAC 2-8-4]
- (p) Two (2) oil tanks at Conversion Coating Line #2, identified as C-9 and C-26, used for applying oil to parts, capacity: 5 and 7 gallons, respectively. [326 IAC 2-8-4]
- (q) Four (4) electric ovens, identified as H-1, I-9, I-10 and J-8, and two (2) air friction ovens, identified as I-11 and K-4.
- (r) One (1) automated etch machine, identified as C-30, expected to be operation by January 2003, including one (1) sulfuric acid tank, two (2) rinse/neutralization tanks, and one (1) rust inhibitor tank.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air

Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

B.3 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual"

as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.

- (c) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; and
 - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.14 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ / Northern Regional Office, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

And

Northern Regional Office: 574-245-4870, facsimile 574-245-4877

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
 - (1) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
 - (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4320 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than one hundred (100) pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (100) pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Overall Source Limit [326 IAC 2-8][326 IAC 2-2]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
 - (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Any change or modification that increases the potential to emit PM to 250 tons per year or more shall cause this source to become a major source pursuant to 326 IAC 2-2, PSD, and shall require prior OAQ approval.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute

averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.8 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.

- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.10 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, not later

than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.11 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP).

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

- (1) Reasonable response steps that may be implemented in the event that a response

step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
 - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.17 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]

- (a) The Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. This statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6-3 and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8). The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The emission statement required by this permit shall be considered timely if the date post-marked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Coating and cleaning operations

- (a) Two (2) paint booths, identified as K-1 and K-2, constructed in 1977 and 1978, respectively, equipped with air atomization spray applicators and dry filters for overspray control, exhausted through Ducts G and F, capacity: 27.0 pounds of coatings per hour, total.
- (b) One (1) centrifuge dip and spin dry film coating machine, also referred to as bulk dip and spin parts coater, identified as L-2, constructed in January 1997 and exhausted through Ducts J and E, capacity: 5 gallons.
- (c) One (1) Passivation Line, also described as Conversion Coating Line #3, exhausting through Stacks B and V, consisting of the following:
 - (1) Seven (7) passivation tanks, identified as C-17 through C-23, capacity: 43 gallons, each;
 - (2) One (1) cold cleaner immersion tank, identified as C-24, constructed prior to February 1993, using Isopropyl Alcohol, capacity: 8 gallons;
 - (3) Two (2) passivation tanks, identified as C-27 and C-28, capacity: 34 gallons, each;
 - (4) One (1) cold cleaner tank, identified as C-29, constructed in 2000, operating in series with C-24, using isopropyl alcohol, capacity: 8 gallons.
- (d) Conversion Coating Line #1, which is a phosphate coating line and a manual etch line, identified as C-12, C-13, C-14, C-15 and C-16, exhausted through Stack W.
- (e) Conversion Coating Line #2, which is a phosphate coating line, identified as C-2 through C-8 and C-25 exhausted through Ducts T and U.
- (f) Conversion Coating Line #4, which is a phosphate coating line, identified as F-1 through F-9, exhausted through Stack A.
- (g) Plating Line #1, for electroless nickel plating, identified as prep tanks E-1 through E-8, E-21, and F-10, with E-1 exhausted through Stack A, plating tanks E-2 through E-8 exhausted through Stack D, and E-21 and F-10 exhausted through Stacks Z and AA.
- (h) Plating Line #2, for electroless nickel plating, identified as E-9 through E-13, E-15 through E-20, E-22 through E-27, E-30 and E-31, exhausted through Stack C.
- (i) One (1) non-destructive testing area, consisting of eight (8) penetrant tanks, identified as J-1 through J-7 and J-14, one (1) ZL-4C penetrant tank, identified as J-11, and one (1) nitric-hydrofluoric tank, identified as J-13.
- (j) Six (6) portable cold cleaner degreasers, identified as I-3 through I-8, constructed prior to March 1993, using methyl ethyl ketone (MEK), capacity: less than 13 gallons, each.
- (k) One (1) immersion solvent cleaning tank, identified as I-13, constructed in 2001, using methyl ethyl ketone (MEK), capacity: 8 gallons.

- (l) One (1) portable immersion cold cleaner tank, identified as I-14, constructed in 2000, using isopropyl alcohol, capacity: 6 gallons.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 8-6-2(a)] [326 IAC 8-1-1] [326 IAC 8-2]

- (a) The amount of VOC delivered to the applicators at the total of the two (2) paint booths (K-1 and K-2) and the VOC used at the one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14), and three (3) insignificant oil tanks (J-12, C-9 and C-26) shall be limited to less than 98.0 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will limit the potential to emit VOC from the entire source to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply. Compliance with this limit will also satisfy the requirements of 326 IAC 8-6, Organic Solvent Emission Limitations.
- (b) The VOC delivered to the applicators at the two (2) paint booths, identified as K-1 and K-2, shall be limited to less than 15 pounds per day, total. Therefore, pursuant to 326 IAC 8-1-1, the requirements of 326 IAC 8-2 are not applicable.
- (c) The VOC used at the one (1) centrifuge dip and spin dry film coating machine, identified as L-2, shall be limited to less than 15 pounds per day. Therefore, pursuant to 326 IAC 8-2-1(a)(4), the requirements of 326 IAC 8-2 are not applicable.

D.1.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4]

- (a) The worst case single HAP delivered to the coating applicators at the two (2) paint booths (K-1 and K-2) and used at the one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14), and three (3) insignificant oil tanks (J-12, C-9 and C-26) shall be limited to less than 9.9 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will limit the potential to emit each individual HAP from the entire source to less than 10 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply.
- (b) The combination of HAPs delivered to the coating applicators in the two (2) paint booths (K-1 and K-2) and the total HAPS used at the one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14), and three (3) insignificant oil tanks (J-12, C-9 and C-26), shall be limited to less than 24.7 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will limit the potential to emit total HAPs from the entire source to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply.

D.1.3 Particulate Matter - 10 microns (PM₁₀) [326 IAC 2-8-4]

Any change or modification at the two (2) paint booths (K-1 and K-2) which increases the solids delivered to the applicators to 2,130 tons per twelve (12) consecutive month period may cause the potential to emit PM₁₀ to increase to 100 tons per year or more, making the requirements of 326 IAC 2-7, Part 70, applicable, based on a fifty percent (50%) transfer efficiency and a control efficiency of ninety-eight percent (98%), and shall require prior IDEM, OAQ, approval. This Condition, in conjunction with the limit of Condition D.2.2, will limit the potential to emit PM₁₀ to less than 100 tons per year from the entire source and make the requirements of 326 IAC 2-7, Part 70, not applicable.

D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-2][326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), and one (1) portable immersion cold cleaner tank (I-14) without remote solvent reservoirs in St. Joseph County shall:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.

- (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tanks (I-13), and one (1) portable immersion cold cleaner tank (I-14), shall:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.
- (c) The owner or operator of the one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), and one (1) portable immersion cold cleaner tank (I-14) shall also comply with 326 IAC 8-3-2. Compliance with 326 IAC 8-3-5 shall also ensure compliance with 326 IAC 8-3-2.

D.1.5 Particulate Matter (PM) [40 CFR 52, Subpart P]

Pursuant to 40 CFR 52, Subpart P, the PM from the two (2) paint booths, identified as K-1 and K-2, shall not exceed the pound per hour emission rate established as E in the following formulas:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for two (2) paint booths (K-1 and K-2), one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13) and one (1) portable immersion cold cleaner tank (I-14) and any control devices.

D.1.7 Particulate [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d) and in order to comply with Condition D.1.5, the particulate from the two (2) spray paint booths, identified as K-1 and K-2, shall be controlled by a dry particulate filter, waterwash, or equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

Compliance Determination Requirements

D.1.8 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC and HAPs usage limitations contained in Conditions D.1.1 and D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.9 VOC Emissions

Compliance with Condition D.1.1 (b) and (c) shall be demonstrated within 30 days of the end of each day based on the total volatile organic compound usage for the day.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.10 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the paint booth stacks (Ducts G and F) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stacks (Ducts G and F) and the presence of overspray on the nearby ground. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.11 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken daily and/or monthly, as indicated and shall be complete and sufficient to establish compliance with the VOC usage limits and the VOC emission limits established in Condition D.1.1, the HAP usage limits and HAP emission limits established in Condition D.1.2, and the solids usage requirement in Condition D.1.3.
 - (1) The amount and VOC, HAP and solids content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

- (2) A log of the dates of use;
 - (3) The total solvent usage, including cleanup solvents, for each month at the entire source;
 - (4) The total VOC usage for each day at the two (2) paint booths;
 - (5) The total VOC usage for each day at the one (1) centrifuge dip and spin dry film coating machine;
 - (6) The total VOC, HAP and solids usage for each month at the two (2) paint booths (K-1 and K-2), one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26); and
 - (7) The weight of VOCs, HAPs and PM₁₀ emitted for each compliance period at the two (2) paint booths (K-1 and K-2), one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26).
- (b) To document compliance with Condition D.1.10, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
 - (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Blasting Process

- (m) Four (4) blaster booths, two (2) using aluminum oxide, one (1) using glass, vermiculite or an equivalent media, and one (1) using glass, plastic, aluminum oxide or an equivalent media, and one (1) tumble blaster, using aluminum oxide beads, collectively identified as J-9, one (1) of the blaster booths is a wet blaster and the others are equipped with small baghouse dust collectors exhausting into the room; all of the blaster booths are equipped with a common baghouse dust collector exhausted through Vent H, maximum capacity: 400 pounds of parts and 0.7 pounds of blasting media per hour, total.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate emission limitations, work practices, and control technologies), the particulate emission rate from the four (4) blaster booths and one (1) tumble blaster, collectively identified as J-9 and all exhausting through Vent H, shall not exceed 1.40 pounds per hour, total, when operating at a process weight rate of 400.7 pounds per hour, total.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.2 Particulate Matter - 10 microns (PM₁₀) [326 IAC 2-8-4]

The potential to emit PM₁₀ from the four (4) blaster booths and one (1) tumble blaster, collectively identified as J-9, shall not exceed 16.7 pounds per hour, equivalent to 73.1 tons per year. This limit, in conjunction with Condition D.1.3, will limit the potential to emit PM₁₀ from the entire source to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7, Part 70, are not applicable.

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facilities and their control devices.

Compliance Determination Requirements

D.2.4 Particulate Control (PM and PM₁₀)

In order to comply with Conditions D.2.1 and D.2.2, the baghouse dust collectors for particulate control shall be in operation and control emissions from the four (4) blaster booths and one (1) tumble blaster, collectively identified as J-9, at all times that the any or all of the four (4) blaster booths and one (1) tumble blaster exhausting to that baghouse dust collector is in operation.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.5 Visible Emissions Notations

- (a) Visible emission notations of the blasting stack (Vent H) exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.6 Baghouse Inspections

An inspection shall be performed within the last month of each calendar quarter of all bags controlling the blasting processes when venting to the atmosphere. All defective bags shall be replaced.

D.2.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.8 Record Keeping Requirements

- (a) To document compliance with Condition D.2.5, the Permittee shall maintain records of visible emission notations of the blasting stack (Vent H) exhaust once per shift.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain records of the results of the inspections required under Condition D.2.6 and the dates the vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:
 - (1) One (1) boiler, identified as B-1, constructed in 1997, fired by natural gas, capacity: 2.07 million British thermal units per hour. [326 IAC 6-2-4]
 - (2) One (1) makeup air unit, identified as M-2, constructed in 1997, fired by natural gas, capacity: 4.8 million British thermal units per hour.
 - (3) One (1) water heater, identified as J-10, exhausting through Stack Y, capacity: 0.150 million British thermal units per hour.
 - (4) Two (2) space heaters, identified as N-1 and N-2, capacity: 0.175 million British thermal units per hour, each.
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour, including one (1) emergency heating unit operating on liquid propane, identified as I-15, capacity: 0.15 million British thermal units per hour.
- (c) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons. Inorganic baths used for make-ups and temporary storage to facilitate changes and material handling.
- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (e) Closed loop heating and cooling systems.
- (f) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume.
- (g) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (h) Paved and unpaved roads and parking lots with public access.
- (i) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (j) Filter or coalescer media changeout.
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (l) One (1) electric furnace, identified as K-5, with a capacity of 0.5 cubic feet.
- (m) One (1) ultrasonic cleaner, identified as I-1.
- (n) One (1) electric spin dryer, identified as I-12.

- (o) One (1) oil tank in the parts cleaning area, identified as J-12, used for applying oil to parts, capacity: 68 gallons, using no more than 0.555 pounds of mineral spirits and oil per hour. [326 IAC 2-8-4]
- (p) Two (2) oil tanks at Conversion Coating Line #2, identified as C-9 and C-26, used for applying oil to parts, capacity: 5 and 7 gallons, respectively. [326 IAC 2-8-4]
- (q) Four (4) electric ovens, identified as H-1, I-9, I-10 and J-8, and two (2) air friction ovens, identified as I-11 and K-4.
- (r) One (1) automated etch machine, identified as C-30, expected to be operation by January 2003, including one (1) sulfuric acid tank, two (2) rinse/neutralization tanks, and one (1) rust inhibitor tank.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate Emission Limitations for Sources of Indirect Heating), the particulate emissions from the 2.07 million British thermal units per hour heat input boiler shall be limited to 0.6 pounds per million British thermal unit heat input.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Any change or modification that increases the potential VOC emissions from the three (3) insignificant oil tanks (J-12, C-9 and C-26) to 25 tons per year or more may make the facilities subject to the requirements of 326 IAC 8-1-6, New facilities; General reduction requirements, and shall require prior IDEM, OAQ, approval.

D.3.3 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4]

The three (3) insignificant oil tanks (J-12, C-9 and C-26) shall comply with Conditions D.1.1 and D.1.2, which limit the VOC and HAP usage at the three (3) insignificant oil tanks (J-12, C-9 and C-26), along with the amount of VOC and HAPs delivered to the applicators at the total of the two (2) paint booths (K-1 and K-2) and the VOC and HAPs used at the one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13) and one (1) portable immersion cold cleaner tank (I-14).

Compliance Determination Requirements

D.3.4 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs)

The three (3) insignificant oil tanks (J-12, C-9 and C-26) shall comply with Conditions D.1.7 and D.1.8, which specify compliance determination requirements for the three (3) insignificant oil tanks (J-12, C-9 and C-26).

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

There are no applicable compliance monitoring conditions for these facilities.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.5 Record Keeping Requirement

The three (3) insignificant oil tanks (J-12, C-9 and C-26) shall comply with Condition D.1.11, which specifies record keeping requirements for the three (3) insignificant oil tanks (J-12, C-9 and C-26).

D.3.6 Reporting Requirements

The three (3) insignificant oil tanks (J-12, C-9 and C-26) shall comply with Condition D.1.12, which specifies reporting requirements for the three (3) insignificant oil tanks (J-12, C-9 and C-26).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Imagineering Enterprises, Inc.
Source Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
FESOP No.: F 141-14152-00090

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Imagineering Enterprises, Inc.
Source Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
FESOP No.: F 141-14152-00090

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p>9 This is an emergency as defined in 326 IAC 2-7-1(12)
CThe Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
CThe Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16</p> |
|--|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Monthly Report

Source Name: Imagineering Enterprises, Inc.
Source Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
FESOP No.: F 141-14152-00090
Facility: Two (2) paint booths, identified as K-1 and K-2
Parameter: VOC usage
Limit: Less than 15 pounds per day, total

Months: _____ Year: _____

Day	Month 1 VOC usage (lbs)	Month 2 VOC usage (lbs)	Month 3 VOC usage (lbs)	Day	Month 1 VOC usage (lbs)	Month 2 VOC usage (lbs)	Month 3 VOC usage (lbs)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				No. of deviations			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Monthly Report

Source Name: Imagineering Enterprises, Inc.
Source Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
FESOP No.: F 141-14152-00090
Facility: One (1) centrifuge dip and spin dry film coating machine, identified as L-2
Parameter: VOC usage
Limit: Less than 15 pounds per day

Months: _____ Year: _____

Day	Month 1 VOC usage (lbs)	Month 2 VOC usage (lbs)	Month 3 VOC usage (lbs)	Day	Month 1 VOC usage (lbs)	Month 2 VOC usage (lbs)	Month 3 VOC usage (lbs)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				No. of deviations			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Imagineering Enterprises, Inc.
Source Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
FESOP No.: F 141-14152-00090
Facilities: Two (2) paint booths (K-1 and K-2), one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26)
Parameter: VOC delivered to the applicators at the two (2) paint booths plus VOC usage at the other facilities
Limit: Less than 98.0 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month

YEAR: _____

Month	VOC Usage (tons)	VOC Usage (tons)	VOC Usage (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Imagineering Enterprises, Inc.
Source Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
FESOP No.: F 141-14152-00090
Facilities: Two (2) paint booths (K-1 and K-2), one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26)
Parameter: Worst case single HAP usage (Individual HAP delivered to the applicators at the two (2) paint booths plus individual HAP usage at the other facilities)
Limit: Less than 9.9 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month

YEAR: _____

Month	Worst case single HAP usage (tons)	Worst case single HAP usage (tons)	Worst case single HAP usage (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Imagineering Enterprises, Inc.
Source Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
FESOP No.: F 141-14152-00090
Facilities: Two (2) paint booths (K-1 and K-2), one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26)
Parameter: Total HAP usage (Combination of HAPs delivered to the applicators at the two (2) paint booths plus total HAPs usage at the other facilities)
Limit: Less than 24.8 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month

YEAR: _____

Month	Total HAP Usage (tons)	Total HAP Usage (tons)	Total HAP Usage (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Imagineering Enterprises, Inc.
Source Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
Mailing Address: 1302 West Sample Street, South Bend, Indiana 46619-3895
FESOP No.: F 141-14152-00090

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP) Renewal

Source Name: Imagineering Enterprises, Inc.
Source Location: 1302 West Sample Street, South Bend, Indiana 46619-3894
County: St. Joseph
SIC Code: 3471/3479
Operation Permit No.: F 141-14152-00090
Permit Reviewer: CarrieAnn Paukowits

On October 10, 2002, the Office of Air Quality (OAQ) had a notice published in the South Bend Tribune, South Bend, Indiana, stating that Imagineering Enterprises, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) renewal to continue to operate a metal automotive and general commercial transportation finishing and coating source with dry filters and baghouses as controls. The notice also stated that OAQ proposed to issue a FESOP renewal for this operation and provided information on how the public could review the proposed FESOP renewal and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP renewal should be issued as proposed.

On November 9, 2002, Nancy M. Norton of Imagineering Enterprises, Inc. submitted comments on the proposed FESOP renewal. The comments are as follows (The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.):

Comment 1:

Emission unit E-29 on Plating Line #1 was the same as listed unit E-7. Delete all references to E-29. Revise paragraphs A.2(g) [p. 6] and D.1(g) [p. 26] of the permit and (g) [p. 2] of the TSD.

Response 1:

Item (g) in Section A.2 and the facility description box in Section D.1 is revised as follows:

- (g) Plating Line #1, for electroless nickel plating, identified as prep tanks E-1 through E-8, E-21, E-29, and F-10, with E-1 exhausted through Stack A, plating tanks E-2 through E-8 ~~and E-29~~ exhausted through Stack D, and E-21 and F-10 exhausted through Stacks Z and AA.

The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document.

Comment 2:

Emission unit E-28 on Plating Line #2 was the same as listed unit E-20. Delete all references to E-28. Revise paragraphs A.2 (h) [p. 6] and D.1 (h) [p. 26] of the Permit and (h) [p. 2] of the TSD.

Response 2:

Item (h) in Section A.2 and the facility description box in Section D.1 is revised as follows:

- (h) Plating Line #2, for electroless nickel plating, identified as E-9 through E-13, E-15 through E-20, E-22 through E-27, ~~E-28~~, E-30 and E-31, exhausted through Stack C.

Comment 3:

A revised description of the blast equipment should read:

"Four (4) blaster booths, two (2) using aluminum oxide, one (1) using glass, vermiculite or an equivalent media and one (1) using glass, plastic, aluminum oxide or an equivalent media, and one (1) tumble blaster, using aluminum oxide beads, collectively identified as J-9..." [the rest of the description is unchanged]

Revise paragraphs A.2 (m) [p. 6] and D.2 (m) [p. 32] of the Permit and (m) [p. 2] of the TSD.

Response 3:

Item (m) in Section A.2 and the facility description box in Section D.2 is revised as follows:

- (m) Four (4) blaster booths, ~~three (3)~~ **two (2)** using aluminum oxide, **one (1) using glass, vermiculite or an equivalent media**, and one (1) using glass, plastic, aluminum oxide or an equivalent media, and one (1) tumble blaster, using aluminum oxide beads, collectively identified as J-9, one (1) of the blaster booths is a wet blaster and the others are equipped with small baghouse dust collectors exhausting into the room; all of the blaster booths are equipped with a common baghouse dust collector exhausted through Vent H, maximum capacity: 400 pounds of parts and 0.7 pounds of blasting media per hour, total.

There is no change in the calculated potential emissions or potential to emit as a result of this change.

Comment 4:

Under Insignificant Activities, I recommend adding an emission unit identification number as follows:

Revise A.3 (b) [p. 7] and D.3 (b) [p. 35] of the Permit and (b) [p. 3] of the TSD to read, "... including one (1) emergency heating unit operating on liquid propane, identified as I-15, capacity: 0.15 million British thermal units per hour." [the rest of the description is unchanged]

Response 4:

Item (b) in Section A.3 and the facility description box in Section D.3 is revised as follows:

- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour, including one (1) emergency heating unit operating on liquid propane, **identified as I-15**, capacity: 0.15 million British thermal units per hour.

Comment 5:

Under Insignificant Activities, I recommend adding an emission unit identification number as follows:

Revise A.3 (r) [p. 7] and D.3 (r) [p. 36] of the Permit and (r) [p. 4] of the TSD to read, "One (1) automated etch machine, identified as C-30, expected to be in operation by January 2003, including one (1) sulfuric acid tank, two (2) rinse/neutralization tanks, and one (1) rust inhibitor tank." Date revised.

Response 5:

Item (r) in Section A.3 and the facility description box in Section D.3 is revised as follows:

- (r) One (1) automated etch machine, **identified as C-30**, expected to be operation by ~~December 2002~~ **January 2003**, including one (1) sulfuric acid tank, two (2) rinse/neutralization tanks, and one (1) rust inhibitor tank.

Comment 6:

Per your request for information concerning the replacement Tumble Blaster in Emission Unit J-9, please find Form PI-23 (2 pages) enclosed.

Response 6:

Form PI-23 for the new tumble blaster was enclosed with the comments. Based on that information, emissions from the new tumble blaster were calculated. Please see page 1 of 1 of TSD Addendum Appendix A for the detailed emissions calculations. The new tumble blaster will replace an existing tumble blaster at Emission Unit J-9. The maximum increase in the unrestricted PM and PM₁₀ emissions is 1.76 tons per year. Thus, this source is still a minor source pursuant to 326 IAC 2-2, PSD. The potential to emit particulate after controls is still less than 1.40 pounds per hour. Therefore, the blasting operations will still comply with 326 IAC 6-3-2 and the FESOP limitation of Condition D.2.2. The new unit will comply with the conditions and limitations of this FESOP renewal, and there are no changes to the permit as a result of this modification.

Upon further review, the OAQ has decided to make the following changes to the FESOP renewal. The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

Change 1:

The general provisions; term of permit rule cite was added to Condition B.3 (Permit Term). In order to clarify the permit term for renewals, the following change has been made:

B.3 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the ~~original~~ **issuance** date of **this permit**, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

Change 2:

Since Condition B.8(c) (Duty to Supplement and Provide Information) already addresses confidentiality, the last sentence of (b) was revised to remove the statement about confidential information, and (c) was updated for clarity as follows:

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]
[326 IAC 2-8-5(a)(4)]

- (b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit. ~~or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.~~ [326 IAC 2-8-4(5)(E)]
- (c) **For information furnished by the Permittee to IDEM, OAQ,** the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

Change 3:

The requirement to include emergencies in the Quarterly Deviation and Compliance Monitoring Report has been moved from Condition B.15 to Condition B.14. In Condition B.14 (Emergency Provisions), the statement at the end of (b)(4) has been removed because it is already stated in (f). Changes are as follows:

B.14 Emergency Provisions [326 IAC 2-8-12]

- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ / Northern Regional Office, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

And

Northern Regional Office: 574-245-4870, facsimile 574-245-4877

~~Failure to notify IDEM, OAQ, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]~~

- (h) **The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.**

Change 4:

Condition B.15(c) (Deviations from Permit Requirements and Conditions), has been deleted and was incorporated as Condition B.14(h) (Emergency Provisions).

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- ~~(c) — Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.~~

Change 5:

Condition B.18 (Permit Amendment or Revision) has been revised to replace “should” with “shall” in (b) as follows:

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application ~~should~~ **shall** be certified by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

Change 6:

A rule cite has been added to Condition B.19 (Operational Flexibility). Condition B.19(b) has been removed, because this is a Part 70 requirement, but not a FESOP requirement.

B.19 Operational Flexibility [326 IAC 2-8-15] **[326 IAC 2-8-11.1]**

- ~~(b) — The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:~~

~~(1) — A brief description of the change within the source;~~

~~(2) — The date on which the change will occur;~~

~~(3) — Any change in emissions; and~~

~~(4) — Any permit term or condition that is no longer applicable as a result of the change.~~

~~The notification which shall be submitted by the Permittee does not require the certification~~

by the "authorized individual" as defined by ~~326 IAC 2-1.1-1.~~

Change 7:

In Condition B.22 (c) (Transfer of Ownership or Operational Control), the rule cite has been corrected as follows:

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-~~11~~ **10**(b)(3)]

Change 8:

326 IAC 2-1.1-7 specifies that nonpayment may result in revocation of the permit. This is not specified in 326 IAC 2-8; therefore, this rule cite is being added to Condition B.23. Also, the section and phone number of the department that the Permittee can contact has been corrected in Condition B.23(c) as follows:

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [**326 IAC 2-1.1-7**]

- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-~~0425~~ **4320** (ask for OAQ, ~~Technical Support and Modeling Section~~ **I/M & Billing Section**), to determine the appropriate permit fee.

Change 9:

Condition C.1 (Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour) has been added to the FESOP as follows, and all remaining Section C conditions have been renumbered.

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [**40 CFR 52 Subpart P**][**326 IAC 6-3-2**]

- (a) Pursuant to **40 CFR 52 Subpart P**, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than one hundred (100) pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to **326 IAC 6-3-2(e)(2)**, the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (100) pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

Change 10:

Condition C.9(e) (Asbestos Abatement Projects) (formerly C.8(e)) has been revised to correct the rule cite as follows:

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-~~41~~, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

Change 11:

The following was added to Condition C.11 (Compliance Requirements) (formerly C.10) to state what IDEM, OAQ does when stack testing, monitoring, or reporting is required to assure compliance with applicable requirements as follows:

C.11 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements **by issuing an order under 326 IAC 2-1.1-11**. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Change 12:

In Condition C.15(e) (Compliance Response Plan - Preparation, Implementation, Records, and Reports) (formerly C.14(e)), the rule cite was corrected to reflect the FESOP rules instead of the Title V rules. Changes are as follows:

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]

- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of ~~326 IAC 2-7-16~~ **326 IAC 2-8-12** (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

Change 13:

Condition C.19(d) (General Reporting Requirements) (formerly C.18(d)) has been revised to indicate all forms as follows:

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (d) Unless otherwise specified in this permit, ~~any quarterly~~ **all reports** required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. ~~The reports do~~ **All reports do** require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Change 14:

The following update has been made to incorporate the 326 IAC 6-3 revisions that became effective on June 12, 2002. The revised rule requires particulate from the two (2) spray booths to be controlled by a dry particulate filter, waterwash, or an equivalent control device, and operated in

accordance with manufacturer's specifications. Therefore, Condition D.1.9 was moved from the Compliance Determination Section of Section D.1 to the Emission Limitations and Standards section and renumbered accordingly. Conditions D.1.7 and D.1.8 are renumbered as D.1.8 and D.1.9.

D.1.97 Particulate [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d) and in order to comply with Condition D.1.5, the particulate from the two (2) spray paint booths, identified as K-1 and K-2, shall be controlled by a dry particulate filter, waterwash, or equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

Change 15:

Condition D.1.8 (previously D.1.7) has been revised as follows:

D.1.8 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC and HAPs usage limitations contained in Conditions D.1.1 and D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) ~~using formulation data supplied by the coating manufacturer.~~ **by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.**

Change 16:

Since the phrase "with compliance demonstrated at the end of each month" was already in Conditions D.1.1(a) and D.1.2(a) and (b), Condition D.1.8(a) has been deleted as follows:

D.1.9 VOC and HAPs Emissions

- ~~(a) Compliance with Conditions D.1.1(a) and D.1.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the twelve (12) month period.~~
- ~~(b) Compliance with Condition D.1.1 (b) and (c) shall be demonstrated within 30 days of the end of each day based on the total volatile organic compound usage for the day.~~

Change 17:

The spelling of calendar has been corrected in Condition D.2.6 as follows:

D.2.6 Baghouse Inspections

An inspection shall be performed within the last month of each ~~calendar~~ **calendar** quarter of all bags controlling the blasting processes when venting to the atmosphere. All defective bags shall be replaced.

Change 18:

Previously, the terms "particulate" and "particulate matter" were both used in the 326 IAC 6-3, but revisions were made to the rule which became effective on June 12, 2002 that included using the term "particulate" consistently in 326 IAC 6-3. Condition C.2.1 reflects that change. Therefore, Condition D.2.4 has been changed as follows:

D.2.4 Particulate Matter Control (PM and PM₁₀)

In order to comply with Conditions D.2.1 and D.2.2, the baghouse dust collectors for particulate control shall be in operation and control emissions from the four (4) blaster booths and one (1) tumble blaster, collectively identified as J-9, at all times that the any or all of the four (4) blaster booths and one (1) tumble blaster exhausting to that baghouse dust collector is in operation.

Change 19:

Condition D.2.7 (Broken or Failed Bag Detection) was revised as follows to describe when a failed unit will be shut down:

D.2.7 Broken or Failed Bag Detection

- (b) For single compartment baghouses, **if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then** failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Change 20:

The words "Matter" and "PM" were removed from Condition D.3.1 because 326 IAC 6-2 refers to Particulate Emissions, not Particulate Matter Emissions. Changes are as follows:

D.3.1 Particulate Matter (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate ~~Matter~~ Emission Limitations for Sources of Indirect Heating), the ~~PM~~ **particulate** emissions from the 2.07 million British thermal units per hour heat input boiler shall be limited to 0.6 pounds per million British thermal unit heat input.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD)
for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	Imagineering Enterprises, Inc.
Source Location:	1302 West Sample Street, South Bend, Indiana 46619-3894
County:	St. Joseph
SIC Code:	3471/3479
Operation Permit No.:	F 141-14152-00090
Permit Reviewer:	CarrieAnn Paukowits

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Imagineering Enterprises, Inc. relating to the operation of a metal automotive and general commercial transportation finishing and coating source. Imagineering Enterprises, Inc. was issued FESOP 141-5487-00090 on December 12, 1996. This permit contains provisions intended to satisfy the requirements of the construction permit rules.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Two (2) paint booths, identified as K-1 and K-2, constructed in 1977 and 1978, respectively, equipped with air atomization spray applicators and dry filters for overspray control, exhausted through Ducts G and F, capacity: 27.0 pounds of coatings per hour, total.
- (b) One (1) centrifuge dip and spin dry film coating machine, also referred to as bulk dip and spin parts coater, identified as L-2, constructed in January 1997 and exhausted through Ducts J and E, capacity: 5 gallons.
- (c) One (1) Passivation Line, also described as Conversion Coating Line #3, exhausting through Stacks B and V, consisting of the following:
 - (1) Seven (7) passivation tanks, identified as C-17 through C-23, capacity: 43 gallons, each;
 - (2) One (1) cold cleaner immersion tank, identified as C-24, constructed prior to February 1993, using Isopropyl Alcohol, capacity: 8 gallons;
 - (3) Two (2) passivation tanks, identified as C-27 and C-28, capacity: 34 gallons, each;
 - (4) One (1) cold cleaner tank, identified as C-29, constructed in 2000, operating in series with C-24, using isopropyl alcohol, capacity: 8 gallons.
- (d) Conversion Coating Line #1, which is a phosphate coating line and a manual etch line, identified as C-12, C-13, C-14, C-15 and C-16, exhausted through Stack W.

- (e) Conversion Coating Line #2, which is a phosphate coating line, identified as C-2 through C-8 and C-25 exhausted through Ducts T and U.
- (f) Conversion Coating Line #4, which is a phosphate coating line, identified as F-1 through F-9, exhausted through Stack A.
- (g) Plating Line #1, for electroless nickel plating, identified as prep tanks E-1 through E-8, E-21, E-29, and F-10, with E-1 exhausted through Stack A, plating tanks E-2 through E-8 and E-29 exhausted through Stack D, and E-21 and F-10 exhausted through Stacks Z and AA.
- (h) Plating Line #2, for electroless nickel plating, identified as E-9 through E-13, E-15 through E-20, E-22 through E-27, E-28, E-30 and E-31, exhausted through Stack C.
- (i) One (1) non-destructive testing area, consisting of eight (8) penetrant tanks, identified as J-1 through J-7 and J-14, one (1) ZL-4C penetrant tank, identified as J-11, and one (1) nitric-hydrofluoric tank, identified as J-13.
- (j) Six (6) portable cold cleaner degreasers, identified as I-3 through I-8, constructed prior to March 1993, using methyl ethyl ketone (MEK), capacity: less than 13 gallons, each.
- (k) One (1) immersion solvent cleaning tank, identified as I-13, constructed in 2001, using methyl ethyl ketone (MEK), capacity: 8 gallons.
- (l) One (1) portable immersion cold cleaner tank, identified as I-14, constructed in 2000, using isopropyl alcohol, capacity: 6 gallons.
- (m) Four (4) blaster booths, three (3) using aluminum oxide and one (1) using glass, plastic, aluminum oxide or an equivalent media, and one (1) tumble blaster, using aluminum oxide beads, collectively identified as J-9, one (1) of the blaster booths is a wet blaster and the others are equipped with small baghouse dust collectors exhausting into the room; all of the blaster booths are equipped with a common baghouse dust collector exhausted through Vent H, maximum capacity: 400 pounds of parts and 0.7 pounds of blasting media per hour, total.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving New Source Review Approval

There are no new facilities proposed at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:
 - (1) One (1) boiler, identified as B-1, constructed in 1997, fired by natural gas, capacity: 2.07 million British thermal units per hour. [326 IAC 6-2-4]
 - (2) One (1) makeup air unit, identified as M-2, constructed in 1997, fired by natural gas,

capacity: 4.8 million British thermal units per hour.

- (3) One (1) water heater, identified as J-10, exhausting through Stack Y, capacity: 0.150 million British thermal units per hour.
- (4) Two (2) space heaters, identified as N-1 and N-2, capacity: 0.175 million British thermal units per hour, each.
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour, including one (1) emergency heating unit operating on liquid propane, capacity: 0.15 million British thermal units per hour.
- (c) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons. Inorganic baths used for make-ups and temporary storage to facilitate changes and material handling.
- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (e) Closed loop heating and cooling systems.
- (f) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume.
- (g) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (h) Paved and unpaved roads and parking lots with public access.
- (i) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (j) Filter or coalescer media changeout.
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (l) One (1) electric furnace, identified as K-5, with a capacity of 0.5 cubic feet.
- (m) One (1) ultrasonic cleaner, identified as I-1.
- (n) One (1) electric spin dryer, identified as I-12.
- (o) One (1) oil tank in the parts cleaning area, identified as J-12, used for applying oil to parts, capacity: 68 gallons, using no more than 0.555 pounds of mineral spirits and oil per hour. [326 IAC 2-8-4]
- (p) Two (2) oil tanks at Conversion Coating Line #2, identified as C-9 and C-26, used for applying oil to parts, capacity: 5 and 7 gallons, respectively. [326 IAC 2-8-4]
- (q) Four (4) electric ovens, identified as H-1, I-9, I-10 and J-8, and two (2) air friction ovens, identified as I-11 and K-4.

- (r) One (1) automated etch machine, expected to be operation by December 2002, including one (1) sulfuric acid tank, two (2) rinse/neutralization tanks, and one (1) rust inhibitor tank.

Existing Approvals

- (a) FESOP 141-5487-00090 issued on December 12, 1996

All terms and conditions from previous approvals issued pursuant to the permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous approvals are superseded by this permit.

The following terms and conditions from previous approvals have been revised in this permit:

- (a) Condition D.1.1(a), Volatile Organic Compound, which states:
The volatile organic compound (VOC) delivered to the coating applicators from the entire source including coating applicators, parts washers and cleanup solvents shall not exceed 8.25 tons per month. Therefore, the requirements of 326 IAC 2-7 do not apply.

Reason not incorporated: The amount of VOC delivered to the applicators at the total of the two (2) paint booths (K-1 and K-2) and the VOC used at the one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26) shall be limited less than 98.0 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will allow for 2.00 tons per year of VOC from insignificant activities, other than the three (3) insignificant oil tanks (J-12, C-9 and C-26). The revised limit allows more flexibility in production without violating any applicable rules. Therefore, the potential to emit VOC from the entire source is still limited to less than 100 tons per year, and the requirements of 326 IAC 2-7 are still not applicable.

- (b) Condition D.1.1(b), Volatile Organic Compound, which states:
Pursuant to 326 IAC 8-2, the volatile organic compounds (VOC) from coating materials shall be limited to 14.9 pounds of VOC per day to avoid the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating).

Reason not incorporated: The two (2) paint booths and the one (1) centrifuge dip and spin dry film coating machine operate independently of each other. No parts are coated at both the spray booths and the dip and spin machine. The condition from the initial FESOP implies that the total VOC from coating materials must be limited to less than 14.9 pounds per day in order to make 326 IAC 8-2-9 not applicable. The limit is revised in this permit to limit the potential to emit VOC from the total of the two (2) paint booths to less than 15 pounds per day and the total potential to emit VOC from the one (1) centrifuge dip and spin dry film coating machine to less than 15 pounds per day. Therefore, the requirements of 326 IAC 8-2-9 are still not applicable.

- (c) Condition D.1.2, Hazardous Air Pollutants, which states:
The hazardous air pollutant emissions from the entire source shall be limited as follows:
(a) A single hazardous air pollutant (HAP) emissions shall not exceed 0.75 tons per month.
(b) Any combination of HAPs emissions shall not exceed 2.00 tons per month. Therefore, the requirements of 326 IAC 2-7 do not apply.

Reason not incorporated: The HAP emission limits in this permit have been changed such

that the potential to emit each individual HAP from the entire source is limited to less than 10 tons per twelve (12) consecutive month period and the potential to emit any combination of HAPs from the entire source is limited to less than 25 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 are still not applicable. The revised limit allows more flexibility in production without violating any applicable rules.

- (d) Condition D.2.1, Particulate Matter, which states:
Pursuant to 326 IAC 6-3 (Process Operations), the particulate matter emissions from the shot blast operations shall not exceed 0.474 pounds per hour. Compliance with the limitations of this condition shall be demonstrated within 180 days of the effective date of this permit.

Reason not incorporated: A tumble blaster was constructed in May 1996 and an additional blaster booth was constructed in May 1998. Neither was included in the initial FESOP and both exhaust to the existing baghouse (J-9), along with the existing three (3) blaster booths. Therefore, the maximum process weight rate has increased to 400.7 pounds per hour and the particulate emissions from the total of the four (4) blaster booths and one (1) tumble blaster shall not exceed 1.40 pounds per hour, when operating at a process weight rate of 400.7 pounds per hour. The source had continued to operate under the existing limitation of 0.474 pounds per hour and no approval was required for the new construction because the source added emissions units of the same type as those already permitted and they do comply with the same applicable requirements and permit terms and conditions as the existing emission units. Since the blaster booth and tumble blaster both exhaust to the existing baghouse, the potential to emit of the blasting operations did not increase as a result of the addition.

- (e) Condition D.1.5, Monitoring, which states:
Daily inspections shall be performed to verify the placement integrity and particle loading of the filters. To document compliance with Condition D.1.3, observations shall be made daily of the overspray while at least one of the booths is in operation. Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an overspray emission, evidence of overspray emission, or other abnormal emission is observed. Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Reason not incorporated: The daily inspection of the integrity and particle loading of the filters is still required. IDEM, OAQ, has determined that the weekly inspections of overspray is sufficient for this type of unit, rather than daily inspection. Also, monthly inspections of coating emissions from the stack and the presence of overspray on the nearby ground replaces the weekly requirement from the initial FESOP. Inspections of the overspray on the rooftops is not required because the ducts for the paint booths exhaust out the side of the building and not above the height of the roof.

The following terms and conditions from previous approvals have been determined to be no longer applicable, and, therefore, are not incorporated into this permit:

- (a) Condition D.1.4, Daily Visible Emissions Notations, which states:
Daily visible emission notations of the paint booth stack exhausts, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not

counting startup or shut down time. In the case of batch or discontinuous operations readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Reason not incorporated: The daily inspections of the filters, weekly observations of the overspray from the stacks and monthly inspections of the coating emissions required in this proposed FESOP are sufficient compliance monitoring requirements to ensure that the two (2) paint booths, identified as K-1 and K-2, comply with the applicable rules.

- (b) Condition D.1.6, Volatile Organic Compound, which states:
 Volatile organic compound (VOC) emissions from the degreaser shall comply with 326 IAC 8-3-3 (Open Top Degreaser Operations).

Reason not incorporated: The degreasers at this source are all cold cleaner degreasers, not open top vapor degreasers. Therefore, the requirements of 326 IAC 8-3-2 and 326 IAC 8-3-5 can be applicable, but the requirements of 326 IAC 8-3-3 are not applicable.

Stack Summary

Some of the stack information has changed since the initial FESOP (FESOP 141-5487-00090) was issued, because some stacks have been removed, moved or added to accommodate equipment that moved within the plant. The stacks currently at the source are as follows:

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
A	Conversion Coating Line #4 and Plating Line #1	21.5	1.95	6,000	Ambient
B	One (1) Passivation Line, also described as Conversion Coating Line #3	24.6	1.49	5,304	Ambient
C	Plating Line #2	27.5	2.0	14,000	Ambient
D	Plating Line #1	25.8	2.0	12,783	Ambient
E	One (1) centrifuge dip and spin dry film coating machine (L-2)	10.8	2.0	2,350	Ambient
F	Two (2) paint booths (K-1 and K-2)	10.8	3.39	3,500	Ambient
G	Two (2) paint booths (K-1 and K-2)	10.8	3.39	7,400	Ambient
H	Four (4) blaster booths and one (1) tumble blaster (J-9)	10.8	2.0	2,350	Ambient
J	One (1) centrifuge dip and spin dry film coating machine (L-2)	10.8	1.33	3,000	Ambient

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
K	Solvent Room	18.7	2.0	750	Ambient
L	Boiler (B-1)	19.7	1.33	675	Ambient
M	Heater	21.0	0.7	75	Ambient
N	Heater	20.3	0.7	75	Ambient
P	Electric Curing Oven (H-1)	20.3	0.8	250	Ambient
Q	Heater	21.0	0.7	75	Ambient
R	Electric Curing Ovens (I-9 and I-10)	18.3	2.91	100	Ambient
S	Basement Vent	19.7	0.5	500	Ambient
T	Conversion Coating Line #2	6.5	3.0	7,000	Ambient
U	Conversion Coating Line #2	6.5	3.0	7,000	Ambient
V	One (1) Passivation Line, also described as Conversion Coating Line #3	To be determined	To be determined	To be determined	To be determined
W	Conversion Coating Line #1	27.5	2.2	13,419	Ambient
X	Electric Air Friction Oven (K-4)	8.3	0.3	300	Ambient
Y	Water Heater (J-10)	21.2	0.4	75	Ambient
Z	Alkaline Degreasing Tank (E-21)	20.2	1.33	4,500	Ambient
AA	Alkaline Degreasing Tank (E-21)	20.2	1.33	4,500	Ambient

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP Renewal application for the purposes of this review was received on March 12, 2001. Additional information was received on November 26, 2001, April 12, April 26, May 3, May 21, August 9, August 21 and August 23, 2002.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See pages 1 through 7 of 7 of Appendix A of this document for detailed emissions calculations.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/year)
PM	242
PM ₁₀	242
SO ₂	1.00
VOC	139
CO	5.00
NO _x	14.5

Note: For the purpose of determining Title V applicability for particulates, PM₁₀, not PM, is the regulated pollutant in consideration.

HAPs	Unrestricted Potential Emissions (tons/year)
Toluene	39.5
MEK	41.7
MIBK	2.19
HF	0.096
HCl	0.135
TOTAL	83.6

- (a) The potentials to emit (as defined in 326 IAC 2-1.1-1(16)) of PM₁₀ and VOC are equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards

that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

The source, issued a FESOP on December 12, 1996, has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of the Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit. The source's potential to emit is based on the emission units included in this FESOP.

Process/emission unit	Potential to Emit After Issuance (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Two (2) paint booths, one (1) dip and spin dry film coating machine, six (6) portable cold cleaner degreasers, one (1) cold cleaner tank, one (1) immersion solvent cleaning tank, one (1) portable immersion cold cleaner tank, and three (3) insignificant oil tanks	21.3	21.3	-	less than 98.0	-	-	less than 9.9 individual less than 24.7 total
Four (4) conversion coating lines, two (2) passivation tanks, two (2) plating lines and one (1) nondestructive testing area	0.231	0.231	negligible	-	-	9.49	0.135 individual 0.231 total
Four (4) blaster booths and one (1) tumble blaster	6.13	73.1	-	-	-	-	-
Insignificant Activities excluding oil tanks	5.00	5.00	1.00	2.00	5.00	5.00	0.058 individual 0.061 total
Total PTE After Issuance	32.7	less than 100	1.00	less than 100	5.00	14.5	Single less than 10 Total less than 25

- (a) The potentials to emit PM₁₀, VOC and HAPs are based on the limitations of 326 IAC 2-8, FESOP. The potential to emit PM at the four (4) blaster booths and one (1) tumble blaster is based on the limitation of 326 IAC 6-3-2, Particulate emission limitations, work practices, and control technologies, when operating at the allowable hourly emissions rate every hour of the year. All other values represent the unrestricted potential to emit.
- (b) The worst case individual HAP at the four (4) conversion coating lines, two (2) passivation tanks, two (2) plating lines and one (1) nondestructive testing area is not the same HAP as

the worst case individual HAP emitted at the two (2) paint booths, one (1) dip and spin dry film coating machine, six (6) portable cold cleaner degreasers, one (1) cold cleaner tank, one (1) immersion solvent cleaning tank, one (1) portable immersion cold cleaner tank and three (3) insignificant oil tanks.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM ₁₀	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone.
- (b) St. Joseph County has been classified as attainment, maintenance attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Federal Rule Applicability

The following rule applicabilities are still true:

- (a) The one (1) insignificant boiler is not subject to the requirements of 40 CFR Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units, because, although the boiler was constructed after June 9, 1989, the capacity of the boiler is less than ten (10) million British thermal units per hour.
- (b) The requirements of 40 CFR 60.110b, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984, are not applicable to this source because the storage vessels at this source have capacities less than forty (40) cubic meters. In addition, all significant tanks are process tanks, not storage tanks.
- (c) The requirements of 40 CFR 60.110 and 110a, Subparts K and Ka, which are Standards of Performance for Storage Vessels for Petroleum Liquids, are not applicable to this source because this source does not have petroleum liquid storage vessels.
- (d) There are still no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

- (e) The cold cleaners are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Part 63, Subpart T, because the cold cleaners do not use halogenated solvents.
- (f) The acid pickling operations are not subject to 40 CFR Part 63, Subpart CCC--National Emission Standards for Hazardous Air Pollutants for Steel Pickling--HCl Process Facilities and Hydrochloric Acid Regeneration Plants Source, because this source is not a major source of hazardous air pollutants (HAPs).
- (g) There are still no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This source was constructed after August 7, 1977. However, the potential to emit each criteria pollutant is less than 250 tons per year and this source is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2. Therefore, the requirements of 326 IAC 2-2, PSD, are not applicable.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit of more than ten (10) tons per year of VOC and NO_x in St. Joseph County. Pursuant to this rule, the owner/operator of the source must submit an emission statement for the source. The statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6 and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8).

326 IAC 2-8-4 (FESOP)

Pursuant to this rule, the amount of PM₁₀ and VOC shall be limited to less than one hundred (100) tons per year. In addition, the amount of a single HAP shall be limited to less than ten (10) tons per year and the combination of all HAPs shall be limited to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2-7, do not apply.

- (a) The amount of VOC delivered to the applicators at the total of the two (2) paint booths (K-1 and K-2) and the VOC used at the one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26) shall be limited to less than 98.0 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will limit the potential to emit VOC from the entire source to less than 100 tons per year and shall make the requirements of 326 IAC 2-7, not applicable.
- (b) HAP emissions will be limited as follows:
 - (1) The worst case single HAP delivered to the coating applicators at the two (2) paint booths (K-1 and K-2) and used at the one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1)

immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26) shall be limited to less than 9.9 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will limit the potential to emit each individual HAP to less than 10 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply.

- (2) The combination of HAPs delivered to the coating applicators in the two (2) paint booths (K-1 and K-2) and the total HAPS used at the one (1) centrifuge dip and spin dry film coating machine (L-2), one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), one (1) portable immersion cold cleaner tank (I-14) and three (3) insignificant oil tanks (J-12, C-9 and C-26) shall be limited to less than a total of 24.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This will limit the potential to emit total HAPs to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply.

(d) The potential to emit PM_{10} is limited as follows:

- (1) The potential to emit PM_{10} from the four (4) blaster booths and one (1) tumble blaster, collectively identified as J-9, shall not exceed 16.7 pounds per hour, equivalent to 73.1 tons per year. The potential to emit PM_{10} from the four (4) blaster booths and one (1) tumble blaster is 1.01 pounds per hour after control by the baghouse. Therefore, the four (4) blaster booths and one (1) tumble blaster will comply with this requirement, and the baghouse dust collectors shall be in operation at all times when the either or all of the four (4) blaster booths and one (1) tumble blaster exhausting to that baghouse dust collector is in operation.
- (2) Any change or modification at the two (2) paint booths (K-1 and K-2) which increases the solids delivered to the applicators to 2,130 tons per twelve (12) consecutive month period may cause the source to become subject to the requirements of 326 IAC 2-7, Part 70, and shall require IDEM, OAQ, approval. Based on a fifty percent (50%) transfer efficiency and a control efficiency of ninety-eight percent (98%), when using dry filters, this throughput limit is equivalent to PM_{10} emissions of 21.3 tons per year from the total of the two (2) paint booths and less than 100 tons per year from the total of all facilities at this source, when operating the dry filters at all times when the two (2) paint booths are in operation.

326 IAC 5-1 (Visible Opacity Limitations)

This source is located north of Kern Road and East of Pine Road in St. Joseph County. Therefore, pursuant to 326 IAC 5-1-2 (Opacity limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-1 (Nonattainment Area Particulate Limitations)

This source is located in St. Joseph County. Although St. Joseph County is currently an attainment county, St. Joseph County is listed in 326 IAC 6-1-7. However, this source is not specifically listed in 326 IAC 6-1-18, the potential to emit PM is limited to less than 100 tons per year and the actual PM emissions after controls are less than ten (10) tons per year. Therefore, the requirements of 326 IAC 6-1 are not applicable.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The one (1) insignificant boiler, identified as B-1, constructed after September 21, 1983, must comply with the requirements of 326 IAC 6-2-4. The emission limitations are based on the following equation is given in 326 IAC 6-2-4:

$$Pt = 1.09/Q^{0.26}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

The heat input capacity of the boiler is 2.07 million British thermal units per hour. There were no boilers existing at this source, when this boiler was constructed.

$$Pt = 1.09/(2.07)^{0.26} = 0.90 \text{ lb/MMBtu heat input}$$

Pursuant to 326 IAC 6-2-4(a), for Q less than ten (10) million British thermal units per hour, Pt shall not exceed 0.6. Therefore, the PM emissions from the one (1) insignificant boiler are limited to 0.6 pound per million British thermal units heat input.

Based on AP-42 emission factors, the PM emissions from each of the boiler is as follows:

$$1.9 \text{ lb PM /mmcf} \times 1 \text{ mmcf/1,000 MMBtu} = 0.0019 \text{ lb PM/MMBtu}$$

Therefore, the one (1) insignificant boiler will comply with this rule.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

- (a) The two (2) paint booths, identified as K-1 and K-2 are subject to the requirements of 326 IAC 6-3-2(d), Particulate emission limitations, work practices, and control technologies. Since this source operates according to a valid Part 70 operating permit issued under 326 IAC 2-8, the requirements of 326 IAC 6-3-2(d)(2) are not applicable. Pursuant to 326 IAC 6-3-2, the surface coating operations shall be controlled by a dry particulate filter, water-wash, or an equivalent control device, and the control device shall be operated in accordance with manufacturer's specifications. A manufacturing process that is subject to this

subsection shall remain subject to it notwithstanding any subsequent decrease in gallons of coating used.

- (b) On June 12, 2002, revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) became effective; this rule was previously referred to as 326 IAC 6-3 (Process Operations). As of the date this FESOP Renewal is being issued, these revisions have not been approved by EPA into the Indiana State Implementation Plan (SIP); therefore, the following requirement from the previous version of 326 IAC 6-3 (Process Operations) which has been approved into the SIP will remain applicable until the revisions to 326 IAC 6-3 are approved into the SIP and the condition is modified in a subsequent permit action:

Pursuant to 40 CFR 52, Subpart P, the PM from the two (2) paint booths, identified as K-1 and K-2, shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The dry filters shall be in operation at all times the two (2) paint booths, identified as K-1 and K-2, are in operation, in order to comply with this limit.

- (b) Pursuant to 326 IAC 6-3-2(e), the particulate emission rate from the four (4) blaster booths and one (1) tumble blaster, collectively identified as J-9 and all exhausting through Vent H, shall not exceed 1.40 pounds per hour, total, when operating at a process weight rate of 400.7 pounds per hour, total. The potential to emit PM after control is 1.01 pounds per hour, total. Therefore, the four (4) blaster booths and one (1) tumble blaster will comply with this rule. The baghouse dust collectors shall be in operation at all times the four (4) blaster booths and one (1) tumble blaster are in operation, in order to comply with this limit. This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (c) This source has insignificant brazing, cutting, soldering and welding. The welding operations use less than 625 pounds of weld wire/rod per day, the torch cutting is less than 3,400 inches per hour and the stock is less than one inch thick, and the potential particulate emissions from the brazing and soldering operations are less than 0.551 pound per hour. Therefore, the welding, cutting, brazing and soldering are exempt from the requirements

of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(b)(9), 326 IAC 6-3-1(b)(10) and 326 IAC 6-3-1(b)(14), respectively.

- (d) Pursuant to 326 IAC 6-3-1(b)(5), the dip coating operations are exempt from the requirements of 326 IAC 6-3, Particulate Emission Limitations for Manufacturing Processes.

326 IAC 8-1-6 (New Facilities; General reduction requirements)

- (a) The two (2) paint booths, identified as K-1 and K-2, and the one (1) centrifuge dip and spin dry film coating machine, identified as L-2, perform metal coating operations. These facilities are limited to make the requirements of 326 IAC 8-2-9, Miscellaneous Metal Coating, not applicable. Since 326 IAC 8-2-9 applies to miscellaneous metal coating operations, the requirements of 326 IAC 8-1-6 are not applicable to these facilities.
- (b) The one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13) and one (1) portable immersion cold cleaner tank (I-14) are subject to the requirements of 326 IAC 8-3, Organic Solvent Degreasing Operations. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.
- (c) The potential VOC emissions from the three (3) insignificant oil tanks (J-12, C-9 and C-26), all constructed after January 1, 1980, are less than 25 tons per year. Therefore, the three (3) insignificant oil tanks (J-12, C-9 and C-26) are not subject to the requirements of 326 IAC 8-1-6, New facilities; General reduction requirements.

326 IAC 8-2 (Surface Coating Emission Limitations)

- (a) The two (2) paint booths, identified as K-1 and K-2, were existing as of January 1, 1980, at a source with potential VOC emissions greater than one hundred (100) tons per year in St. Joseph County. The VOC delivered to the applicators at the two (2) paint booths, identified as K-1 and K-2, is limited to less than 15 pounds per day, total. Therefore, pursuant to 326 IAC 8-1-1, the requirements of 326 IAC 8-2 are not applicable.
- (b) The VOC used at the one (1) centrifuge dip and spin dry film coating machine, identified as L-2, constructed after July 1, 1990 is limited to less than 15 pounds per day. Therefore, pursuant to 326 IAC 8-2-1(a)(4), the requirements of 326 IAC 8-2 are not applicable.

326 IAC 8-3 (Organic Solvent Degreasing Operations)

- (a) The one (1) cold cleaner immersion tank (C-24), six (6) portable cold cleaner degreasers (I-3 through I-8), one (1) cold cleaner tank (C-29), one (1) immersion solvent cleaning tank (I-13), and one (1) portable immersion cold cleaner tank (I-14) are all cold cleaner degreasers, without remote solvent reservoirs, located in St. Joseph County. Therefore, the requirements of 326 IAC 8-3-2, Organic Solvent Degreasing Operations: Cold Cleaner Operation and 326 IAC 8-3-5, Organic Solvent Degreasing Operations: Cold Cleaner Degreaser Operation and Control, are applicable. Compliance with 326 IAC 8-3-5 will satisfy the requirements of 326 IAC 8-3-2.
 - (1) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaner degreasers shall ensure that the following requirements are met:
 - (A) Equip the degreaser with a cover. The cover must be designed so that it

can be easily operated with one (1) hand if:

- (i) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
 - (ii) The solvent is agitated; or
 - (iii) The solvent is heated.
- (B) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (C) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (D) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (E) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
- (i) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (ii) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (iii) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (2) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaning degreasers shall ensure that the following operating requirements are met:
- (A) Close the cover whenever articles are not being handled in the degreaser.
 - (B) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

- (C) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.
- (b) The three (3) insignificant oil tanks (J-12, C-9 and C-26) are not subject to requirements of 326 IAC 8-3, Organic Solvent Degreasing Operations, because they are used to apply a protective oil to parts. They are not degreasers.

326 IAC 8-4 (Petroleum Sources)

This source does not have any petroleum refining, storage, transfer or dispensing operations. Therefore, the requirements of 326 IAC 8-4, Petroleum Sources, are not applicable.

326 IAC 8-6 (Organic Solvent Emission Limitations)

Construction of this source may have commenced after October 7, 1974, and prior to January 1, 1980. The potential VOC emissions from this source are greater than 100 tons per year. Therefore, the requirements of 326 IAC 8-6 are applicable. The potential to emit VOC is limited to less than 100 tons per year, pursuant to 326 IAC 2-8-4, FESOP. Therefore, the FESOP limit satisfies requirements of 326 IAC 8-6-2(a).

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

This source is located in St. Joseph County. Therefore, the requirements of 326 IAC 8-9, Volatile Organic Liquid Storage Vessels, are not applicable.

326 IAC 8-10 (Automobile Refinishing)

This source does not refinish after-market motor vehicles or mobile equipment under the SIC Code 7532 (top, body, and upholstery repair shops and paint shops). Therefore, it is not an automobile refinishing source as defined by 326 IAC 8-10-2(5) and the requirements of 326 IAC 8-10-2 are not applicable.

326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd County)

This source is not located in Clark or Floyd counties. Therefore, the requirements of 326 IAC 10-1 are not applicable.

Testing Requirements

There are still no testing requirements for this source.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are

found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

- (a) The following new compliance requirements were incorporated into this FESOP:

An inspection shall be performed within the last month of each calendar quarter of all bags controlling the blasting processes when venting to the atmosphere. All defective bags shall be replaced.

All other compliance monitoring requirements are from previously issued permits. However, the visible emission notations for the four (4) blaster booths and one (1) tumble blaster are now required once per shift rather than once daily. IDEM, OAQ, has determined that, for this type of operation, monitoring once per shift is required to ensure continuous compliance.

- (b) The compliance monitoring requirements from the initial FESOP, which are still applicable to the two (2) paint booths, identified as K-1 and K-2, are as follows:

- (1) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the paint booth stacks (Ducts G and F) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (2) Monthly inspections shall be performed of the coating emissions from the stacks (Ducts G and F) and the presence of overspray on the nearby ground. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (3) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the dry filters for the overspray control must operate properly to ensure compliance with 326 IAC 6-3-2(d) (Particulate emission limitations, work practices, and control technologies) and 326 IAC 2-8 (FESOP).

- (c) The compliance monitoring requirements from the initial FESOP which are still applicable to the four (4) blaster booths and one (1) tumble blaster are as follows:

- (1) Visible emission notations of the blasting stack (Vent H) exhaust shall be performed

once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (2) In the event that bag failure has been observed:
 - (A) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
 - (B) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions, in addition to the added monitoring condition, are necessary because the individual baghouse dust collectors and the common baghouse dust collector must operate properly to ensure compliance with 326 IAC 6-3-2(d) (Particulate emission limitations, work practices, and control technologies) and 326 IAC 2-8 (FESOP).

- (d) All compliance requirements from previous approvals were incorporated into this FESOP except the following:
 - (1) Condition D.1.4, Daily Visible Emissions Notations, which states:
Daily visible emission notations of the paint booth stack exhausts, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations readings shall be taken during that part

of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Reason not incorporated: The daily inspections of the filters, weekly observations of the overspray from the stacks and monthly inspections of the coating emissions required in this proposed FESOP are sufficient compliance monitoring requirements to ensure that the two (2) paint booths, identified as K-1 and K-2, comply with the applicable rules.

- (2) Condition D.1.5, Monitoring, which states:
Daily inspections shall be performed to verify the placement integrity and particle loading of the filters. To document compliance with Condition D.1.3, observations shall be made daily of the overspray while at least one of the booths is in operation. Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an overspray emission, evidence of overspray emission, or other abnormal emission is observed. Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Reason not incorporated: The daily inspection of the integrity and particle loading of the filters is still required. IDEM, OAQ, has determined that the weekly inspections of overspray is sufficient for this type of unit, rather than daily inspection. Also, monthly inspections of coating emissions from the stack and the presence of overspray on the nearby ground replaces the weekly requirement from the initial FESOP. Inspections of the overspray on the rooftops is not required because the ducts for the paint booths exhaust out the side of the building and not above the height of the roof.

Conclusion

The operation of this metal automotive and general commercial transportation finishing and coating source shall be subject to the conditions of the attached proposed FESOP No.: F 141-14152-00090.

Appendix A: Emission Calculations
Baghouse Operations
New Tumble Blaster (replaces and existing tumble blaster)

Company Name: Imagineering Enterprises, Inc.
Address City IN Zip: 1302 West Sample St., South Bend, IN 46619
FESOP: F 141-14152
Plt ID: 141-00090
Reviewer: CarrieAnn Paukowits
Date: November 11, 2002

Unit ID	Inside Control Efficiency (%)	Based on Inside Baghouse		Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Inside Controls (lb/hr)	Emission Rate after Inside Controls (tons/yr)	Outside Control Efficiency (%)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
		Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)							
Tumble blaster (part of J-9)	98.0%	0.0084	800	2.88	12.6	0.058	0.252	85.0%	0.009	0.038

Methodology

Emission Rate in lbs/hr (after inside controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (after controls) = Emission Rate in lbs/hr after inside controls x (1-outside control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Four (4) blaster booths and one (1) tumble blaster

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
J-9 before modification	98.0%	0.0500	2350	50.4	221	1.01	4.41
J-9 after modification*	98.0%	0.0504	2350	50.8	222	1.02	4.45
Net change:				0.403	1.76	0.008	0.035

* The grain loading for J-9 after the modification is calculated as follows: Grain loading before modification + (Emission rate in lbs/hr after controls x 7,000/60 x Flow Rate)

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

**Appendix A: Emission Calculations
VOC and Particulate
From Surface Coating Operations**

**Company Name: Imagineering, Inc.
Address City IN Zip: 1302 West Sample St., South Bend, IN 46619
FESOP: F 141-14152
Plt ID: 141-00090
Reviewer: CarrieAnn Paukowits
Date: March 12, 2001**

Unrestricted Potential to Emit from the two (2) paint booths and one (1) centrifuge dip and spin dry film coating machine

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Maximum Consumption		Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential tons per year	lb VOC /gal solids	Transfer Efficiency
							(lbs/hr)	(gals/hr)								
Worst-Case VOC Coating																
E-50 Lube	8.80	100.00%	0.0%	100.0%	0.0%	0.00%	5.00	0.568	8.80	8.80	5.00	120.00	21.90	see below	N/A	50%
Solvent Blend 3534	6.86	100.00%	0.0%	100.0%	0.0%	0.00%	22.0	3.207	6.86	6.86	22.00	528.00	96.36	see below	N/A	50%
Worst-Case PM from Coating		64.00%	0.0%	64.0%	0.0%	36.00%	27.0							21.29	0.00	50%

State Potential Emissions

Add worst case coating to all solvents

TOTAL:	27.0	648	118	21.3
Control Efficiency:	0.0%	0.0%	0.0%	98.0%
PTE After Control:	27.0	648	118	0.426

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Max Consumption (gal/hr) = (lbs/hr) / Density (lbs/gal)

Potential VOC Pounds per Hour = Max Consumption (lbs/hr) * Wgt. % Organics

Potential VOC Pounds per Day = Max Consumption (lbs/hr) * Wgt. % Organics * (24 hr/day)

Potential VOC Tons per Year = Max Consumption (lbs/hr) * Wgt. % Organics * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = Max Consumption (lbs/hour) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations
HAP Emissions**

Company Name: Imagineering, Inc.
Address City IN Zip: 1302 West Sample St., South Bend, IN 46619
FESOP: F 141-14152
Plt ID: 141-00090
Reviewer: CarrieAnn Paukowits
Date: March 12, 2001

Unrestricted Potential to Emit from the two (2) paint booths and one (1) centrifuge dip and spin dry film coating machine

Material	Density (lb/gal)	Maximum Consumption (lbs/hr)	Weight % Toluene	Weight % MEK	Weight % MIBK	Toluene Emissions (tons/yr)	MEK Emissions (tons/yr)	MIBK Emissions (tons/yr)
Worst-Case HAP Coating								
E-50 Lube	8.80	5.000	35.00%	0.00%	10.00%	7.67	0.00	2.19
Solvent Blend 3534	6.86	22.000	33.00%	33.00%	0.00%	31.80	31.80	0.00

TOTALS:	(tons/yr):	39.5	31.8	2.19
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Total State Potential Emissions

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Degreasing and Oil Tanks**

Page 3 of 7 TSD AppA

Company Name: Imagineering, Inc.
Address City IN Zip: 1302 West Sample St., South Bend, IN 46619
FESOP: F 141-14152
Plt ID: 141-00090
Reviewer: CarrieAnn Paukowits
Date: March 12, 2001

Material	Maximum Consumption (lbs/hr)	Weight % VOC	Weight % MEK		VOC Emissions (tons/yr)	MEK Emissions (tons/yr)
MEK	2.267	100%	100%		9.93	9.93
Isopropyl Alcohol	1.400	100%	0%		6.13	0.00
Mineral Spirits and Oil	0.555	100%	0%		2.43	0.00

Total State Potential Emissions

TOTALS:	(tons/yr):	18.5	9.93
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METHODOLOGY

VOC/HAPs emission rate (tons/yr) = Material Usage (lbs/hr) * Weight % VOC/HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations
NOx Emissions

Company Name: Imagineering, Inc.
Address City IN Zip: 1302 West Sample St., South Bend, IN 46619
FESOP: F 141-14152
Pit ID: 141-00090
Reviewer: CarrieAnn Paukowits
Date: March 12, 2001

NOx Emissions

Process	Parts Passivated (cub. ft./ yr)	Free Iron on parts (microns/ sq. ft.)	Free iron on parts (cub. ft/sq. ft)	Amount of Free Iron (cub. ft.)	Density of Iron (lbs/ cub. ft.)	Amount of Free Iron (lb moles)	NO3 per lb mole of iron (lbs/ lb mole Fe)	NOx emissions (lbs/yr)	NOx emissions (tons/yr)
Passivation Line	47590	10	3.28E-05	1.56	490.68	13.72	62	851	0.425

Methodology

Assumption: Maximum thickness of 50 microns of free Iron on surface of parts prior to passivation
Free iron on parts (cub. ft/sq. ft) = Free Iron on parts (microns/sq. ft) x 3.937E-5 inch/micron/ 12 inches/ft
Amount of Free Iron (cub. ft) = Free Iron on Parts (cub. ft/sq. ft) x Parts Passivated (cub. ft/yr)
Amount of Free Iron (lb moles) = Density of Iron (lbs/cub. ft) x Amount of Free Iron (cub. ft) x 1 lb mole/ 55.847 lbs
NO3 emissions (lbs/yr) = NO3 amount (lbs/lb mole) x Amount of Free Iron (lb moles)
NO3 emissions (tons/yr) = NO3 emissions (lbs/yr) / 2,000 lbs/ton
Calculations based on the ALOHA model.

NOx Emissions

Tank	Capacity (gallons)	Molecular Weight HNO3 (Mw HNO3) (kg/kmol)	Molecular Weight Water (Mw H2O) (kg/kmol)	Molecular Diffusivity of Water in Air (D h2o) (sq.m/s)	Molecular Diffusivity of HNO3 in Air (D hno3) (sq.m/s)	Laminar Schmidt Number (Sc) (sq.m/s)	Vent flow rate (U) (m/s)	Tank Surface Diameter Along Wind Direction (Z) (m)	Mass Transfer Coefficient (Km) (m/s)	Concentration of 42 Be HNO3, 67.7 wt % (vol %)	Nominal Concentration of HNO3 in Tank (wt %)	Partial Vapor Pressure at 20 deg. C (Pv) (Pa)	Temperature (T) (deg C)	Surface Area of Tank (sq.m)	Evaporation Rate (kg/s)	Potential HNO3 Emissions (tons/yr)	Potential NOx Emissions (tons/yr)
F-10	265	63.013	18.015	2.4E-05	1.28E-05	1.169	10.1603	1.524	0.025	100.00%	67.70%	317.384	20	1.16	2.38E-04	8.31	8.31
E-24	12.86	63.013	18.015	2.4E-05	1.28E-05	1.169	0.52065	0.558	0.003	100.00%	67.70%	317.384	20	0.213	4.86E-06	0.169	0.169
E-25	12.86	63.013	18.015	2.4E-05	1.28E-05	1.169	0.52065	0.558	0.003	100.00%	67.70%	317.384	20	0.213	4.86E-06	0.169	0.169
E-30	10	63.013	18.015	2.4E-05	1.28E-05	1.169	0.52065	0.558	0.003	67.00%	45.36%	21.15	20	0.213	3.24E-07	0.011	0.011
Total:																8.66	8.66

Methodology

Molecular Diffusivity of HNO3 in Air (D hno3) = D h2o x (Mw H2O/Mw HNO3)^0.5
Laminar Schmidt Number (Sc) = Viscosity of Air (0.000015) / D hno3
Mass Transfer Coefficient (Km) = 0.0048 x U^(7/9) x Z^(1/9) x Sc^(1/2/3)
Evaporation Rate (kg/sec) = Surface Area of Tank x Km x (Mw HNO3 x Pv/(8314 J/kmolK) x (T+273.15))
Potential HNO3 Emissions = (Evaporation Rate (kg/sec) x 2.21 lb/kg) x 60 min/hr x 8,760 hrs/yr / 2,000 lbs/ton
Potential NOx Emissions = Potential HNO3 Emissions (conservative estimate)
Calculations based on the ALOHA model.

See page 5 for more NOx emissions

Appendix A: Emission Calculations
HF and NOx Emissions

Company Name: Imagineering, Inc.
Address City IN Zip: 1302 West Sample St., South Bend, IN 46619
FESOP: F 141-14152
Pit ID: 141-00090
Reviewer: CarrieAnn Paukowits
Date: March 12, 2001

ESTIMATION OF ACID LOSSES FROM NITRIC/HF PICKLING TANKS

Open Tanks

E-17								E-22								E-4							
INPUT DATA				RESULTS				INPUT DATA				RESULTS				INPUT DATA				RESULTS			
Item	Units	Quantity		Item	Units	Quantity	Quantity	Item	Units	Quantity		Item	Units	Quantity	Quantity	Item	Units	Quantity		Item	Units	Quantity	Quantity
HF in acid	% w/v	0		HF in acid	% w/v	0		HF in acid	% w/v	0		HF in acid	% w/v	2.77		HF in acid	% w/v	0		HF in acid	% w/v	0.001	HF HNO3
HNO3 in acid	% w/v	47.42		HNO3 in acid	% w/v	47.42		HNO3 in acid	% w/v	47.42		HNO3 in acid	% w/v	0		HNO3 in acid	% w/v	0		HNO3 in acid	% w/v	0.010	0.000
Temperature	deg F	68		Temperature	deg F	68		Temperature	deg F	68		Temperature	deg F	68		Temperature	deg F	68		Temperature	deg F	0.261	0.000
Exhaust rate	cfm/sqft	0		Exhaust rate	cfm/sqft	0		Exhaust rate	cfm/sqft	0		Exhaust rate	cfm/sqft	0		Exhaust rate	cfm/sqft	0		Exhaust rate	cfm/sqft	0.261	0.000
Total air	acfm	14000		Total air	acfm	14000		Total air	acfm	14000		Total air	acfm	12783		Total air	acfm	12783		Total air	acfm	0.045	0.000
Tank width	ft	2		Tank width	ft	2.24		Tank width	ft	2.24		Tank width	ft	2.25		Tank width	ft	2.25		Tank width	ft	0.045	0.000
Tank length	ft	4		Tank length	ft	4		Tank length	ft	4		Tank length	ft	5		Tank length	ft	5		Tank length	ft	0.045	0.000
Calcs for open tank								Calcs for open tank								Calcs for open tank							
sg	1.2513			sg	1.251326			sg	1.251326			sg	1.01			sg	1.01			sg	1.01		
%w/w HF	0			%w/w HF	0			%w/w HF	0			%w/w HF	2.74			%w/w HF	2.74			%w/w HF	2.74		
%w/w HNO3	37.896			%w/w HNO3	37.8958			%w/w HNO3	37.8958			%w/w HNO3	0.00			%w/w HNO3	0.00			%w/w HNO3	0.00		
vp HF	0			vp HF	0			vp HF	0			vp HF	0.04			vp HF	0.04			vp HF	0.04		
vp HNO3/20	0.0022			vp HNO3/20	0.002178			vp HNO3/20	0.002178			vp HNO3/20	0.0022			vp HNO3/20	0.0022			vp HNO3/20	0.0022		
vp HNO3/30	0.0232			vp HNO3/30	0.023159			vp HNO3/30	0.023159			vp HNO3/30	0.0232			vp HNO3/30	0.0232			vp HNO3/30	0.0232		
vp HNO3/40	0.0781			vp HNO3/40	0.078108			vp HNO3/40	0.078108			vp HNO3/40	0.0781			vp HNO3/40	0.0781			vp HNO3/40	0.0781		
vp HNO3 act	0.0665			vp HNO3 act	0.066546			vp HNO3 act	0.066546			vp HNO3 act	0.0000			vp HNO3 act	0.0000			vp HNO3 act	0.0000		
temp K	293			temp K	293			temp K	293			temp K	293			temp K	293			temp K	293		
temp R	528			temp R	528			temp R	528			temp R	528			temp R	528			temp R	528		
vp water	17.467			vp water	17.47			vp water	17.47			vp water	17.47			vp water	17.47			vp water	17.47		
1-MR	0.6589			1-MR	0.658938			1-MR	0.658938			1-MR	0.97			1-MR	0.97			1-MR	0.97		
vp sol'n	11.509			vp sol'n	11.51			vp sol'n	11.51			vp sol'n	16.89			vp sol'n	16.89			vp sol'n	16.89		
Air vel	29.167			Air vel	26.04167			Air vel	26.04167			Air vel	18.94			Air vel	18.94			Air vel	18.94		
HF loss	0.000	per sq.ft		HF loss	0.000	per sq.ft		HF loss	0.000	per sq.ft		HF loss	0.001	per sq.ft		HF loss	0.001	per sq.ft		HF loss	0.001	per sq.ft	
HNO3 loss	0.006	per sq.ft		HNO3 loss	0.005	per sq.ft		HNO3 loss	0.005	per sq.ft		HNO3 loss	0.000	per sq.ft		HNO3 loss	0.000	per sq.ft		HNO3 loss	0.000	per sq.ft	
water loss	-0.0562	per sq.ft		water loss	-0.050866	per sq.ft		water loss	-0.050866	per sq.ft		water loss	0.094	per sq.ft		water loss	0.094	per sq.ft		water loss	0.094	per sq.ft	

Closed Tanks

E-27								J-13								E-30							
INPUT DATA				RESULTS				INPUT DATA				RESULTS				INPUT DATA				RESULTS			
Item	Units	Quantity		Item	Units	Quantity	Quantity	Item	Units	Quantity		Item	Units	Quantity	Quantity	Item	Units	Quantity		Item	Units	Quantity	Quantity
HF in acid	% w/v	2.75		HF in acid	% w/v	1.12		HF in acid	% w/v	1.12		HF in acid	% w/v	0.08		HF in acid	% w/v	0.08		HF in acid	% w/v	0.000	HF HNO3
HNO3 in acid	% w/v	22.76		HNO3 in acid	% w/v	18.18		HNO3 in acid	% w/v	18.18		HNO3 in acid	% w/v	63.77		HNO3 in acid	% w/v	63.77		HNO3 in acid	% w/v	0.000	see page 4
Temperature	deg F	68		Temperature	deg F	68		Temperature	deg F	68		Temperature	deg F	68		Temperature	deg F	68		Temperature	deg F	0.000	see page 4
Exhaust rate	acfm	2		Exhaust rate	acfm	2		Exhaust rate	acfm	2		Exhaust rate	acfm	2		Exhaust rate	acfm	2		Exhaust rate	acfm	1.277	see page 4
# takeoffs	1.47			# takeoffs	1.47			# takeoffs	1.47			# takeoffs	1.47			# takeoffs	1.47			# takeoffs	1.47		
Tank width	ft	1.25		Tank width	ft	1.25		Tank width	ft	1.25		Tank width	ft	1.25		Tank width	ft	1.25		Tank width	ft	0.00003	see page 4
Tank length	ft	1.83		Tank length	ft	1.83		Tank length	ft	1.83		Tank length	ft	1.83		Tank length	ft	1.83		Tank length	ft	1.83	
Freeboard	ft	0.58		Freeboard	ft	0.42		Freeboard	ft	0.42		Freeboard	ft	0.58		Freeboard	ft	0.58		Freeboard	ft	0.58	
Calcs for closed tank								Calcs for closed tank								Calcs for closed tank							
sg	1.1306			sg	1.100			sg	1.100			sg	1.338			sg	1.338			sg	1.338		
%w/w HF	2.4323			%w/w HF	1.018			%w/w HF	1.018			%w/w HF	0.060			%w/w HF	0.060			%w/w HF	0.060		
%w/w HNO3	20.13			%w/w HNO3	16.52			%w/w HNO3	16.52			%w/w HNO3	47.651			%w/w HNO3	47.651			%w/w HNO3	47.651		
vp HF	0.0331	mmHg		vp HF	0.014	mmHg		vp HF	0.014	mmHg		vp HF	0.001	mmHg		vp HF	0.001	mmHg		vp HF	0.001	mmHg	
vp HNO3/20	0.0022	mmHg		vp HNO3/20	0.002	mmHg		vp HNO3/20	0.002	mmHg		vp HNO3/20	0.002	mmHg		vp HNO3/20	0.002	mmHg		vp HNO3/20	0.002	mmHg	
vp HNO3/30	0.0232	mmHg		vp HNO3/30	0.023	mmHg		vp HNO3/30	0.023	mmHg		vp HNO3/30	0.023	mmHg		vp HNO3/30	0.023	mmHg		vp HNO3/30	0.023	mmHg	
vp HNO3/40	0.0781	mmHg		vp HNO3/40	0.078	mmHg		vp HNO3/40	0.078	mmHg		vp HNO3/40	0.078	mmHg		vp HNO3/40	0.078	mmHg		vp HNO3/40	0.078	mmHg	
vp HNO3 act	0.0025	mmHg		vp HNO3 act	0.002	mmHg		vp HNO3 act	0.002	mmHg		vp HNO3 act	CONC TOO HIGH	mmHg		vp HNO3 act	CONC TOO HIGH	mmHg		vp HNO3 act	CONC TOO HIGH	mmHg	
temp K	293			temp K	293			temp K	293			temp K	293			temp K	293			temp K	293		
temp R	528			temp R	528			temp R	528			temp R	528			temp R	528			temp R	528		
vp water	17.467	mmHg		vp water	17.47	mmHg		vp water	17.47	mmHg		vp water	17.47	mmHg		vp water	17.47	mmHg		vp water	17.47	mmHg	
1-MR	0.7896			1-MR	0.839099			1-MR	0.839099			1-MR	0.57			1-MR	0.57			1-MR	0.57		
vp sol'n	13.792	mmHg		vp sol'n	14.66	mmHg		vp sol'n	14.66	mmHg		vp sol'n	9.96	mmHg		vp sol'n	9.96	mmHg		vp sol'n	9.96	mmHg	
Air vel	0.0156	fps		Air vel	0.021596	fps		Air vel	0.021596	fps		Air vel	0.02	fps		Air vel	0.02	fps		Air vel	0.02	fps	
HF loss	0.0001	lb/h/sqft		HF loss	5.9E-05	lb/h/sqft		HF loss	5.9E-05	lb/h/sqft		HF loss	3.46101E-06	lb/h/sqft		HF loss	3.46101E-06	lb/h/sqft		HF loss	3.46101E-06	lb/h/sqft	
HNO3 loss	3E-05	lb/h/sqft		HNO3 loss	1.86E-05	lb/h/sqft		HNO3 loss	1.86E-05	lb/h/sqft		HNO3 loss	see page 4	lb/h/sqft		HNO3 loss	see page 4	lb/h/sqft		HNO3 loss	see page 4	lb/h/sqft	
water loss	0.003	lb/h/sqft		water loss	0.006663	lb/h/sqft		water loss	0.006663	lb/h/sqft		water loss	-0.013237749	lb/h/sqft		water loss	-0.013237749	lb/h/sqft		water loss	-0.013237749	lb/h/sqft	

Assumptions for HNO3 and HF tanks- Evaporation into air at 60-80 deg F, 70%RH
Essentially atmospheric pressure
Either general building or lateral exhaust.
Less than 15% HF and/or 35% nitric

Total Potential HNO3 Emissions (tons/yr):	0.408
Total Potential NOx Emissions (tons/yr):	0.408
Total Potential HF Emissions (tons/yr):	0.096

Methodology

Calculation methodology by Esco Engineering, Kingsville, Ontario - March 1993

This spreadsheet cannot handle concentrations greater than 40% of nitric acid. Emissions from those tanks (F-10, E-24, E-25 and E-30) are calculated on Page 4 of 7.

For total emissions from OPEN tanks:

Based on either air flow per square foot of tank surface or the total rate and tank dimensions

For total emissions from CLOSED tanks:

Freeboard is the distance from the liquid surface to the underside of the cover.

The # of takeoffs is the number of points at which air is exhausted from the tank - assumed equally spaced.

For strip picklers with continuous side slots, # of takeoffs = tank length/tank width

CORRECTION FACTORS - Esco Engineering, Kingsville, Ontario - March 1993

The spreadsheet calculations give maximum values for emissions based on the assumptions, i.e.

- all air passes over the whole liquid surface
- air above the liquid contains no acid vapor
- air/acid vapor/water vapor are uniformly mixed

In practice, some air will short-circuit, and only pass over some of the surface, and the mixture will not be uniform.

Also, the evaporation into the air will reduce the rate of evaporation towards the outlet end of the air flow.

Calculations on the effect of the build-up of acid and water vapors in the air show that this introduces an error of less than 10% (high) in the estimate, for typical pickling conditions.

Comparison of estimated and measured values show that the estimates are fairly good for open tanks.

Uneven air flow, and incomplete mixing, in closed picklers, have quite a significant effect in reducing rates of evaporation.

Appendix A: Emission Calculations
HCl Emissions

Company Name: Imagineering, Inc.
Address City IN Zip: 1302 West Sample St., South Bend, IN 46619
FESOP: F 141-14152
Plt ID: 141-00090
Reviewer: CarrieAnn Paukowits
Date: March 12, 2001

ESTIMATION OF HCl LOSSES FROM PICKLING TANKS

Open Tanks

C-3							E-4							E-13						
INPUT DATA			RESULTS				INPUT DATA			RESULTS				INPUT DATA			RESULTS			
Item	Units	Quantity	Item	Units	Quantity	Quantity	Item	Units	Quantity	Item	Units	Quantity	Quantity	Item	Units	Quantity	Item	Units	Quantity	Quantity
HCl in acid	% w/v	9.35					HCl in acid	% w/v	10.37					HCl in acid	% w/v	10.26				
Fe in acid	% w/v	4.5	Surface loss	lb/h/sqft	0.000	0.035	Fe in acid	% w/v	4.5	Surface loss	lb/h/sqft	0.001	0.085	Fe in acid	% w/v	4.5	Surface loss	lb/h/sqft	0.001	0.085
Temperature	deg F	68	Total loss	lb/h	0.006	0.756	Temperature	deg F	68	Total loss	lb/h	0.012	0.962	Temperature	deg F	68	Total loss	lb/h	0.012	0.962
Exhaust rate	cfm/sqft	0	Exhaust conc.	ppmv	0.152		Exhaust rate	cfm/sqft	0	Exhaust conc.	ppmv	0		Exhaust rate	cfm/sqft	0	Exhaust conc.	ppmv	0	
Total air	acfm	7000		% by vol		1.73	Total air	acfm	12783		% by vol		1.73	Total air	acfm	14000		% by vol		1.73
Tank width	ft	3.25		ton/yr	0.026		Tank width	ft	2.25		ton/yr	0.050		Tank width	ft	2.04		ton/yr	0.050	
Tank length	ft	6.71					Tank length	ft	5					Tank length	ft	4				
Calcs for open tank							Calcs for open tank							Calcs for open tank						
sg		1.15					sg		1.15					sg		1.15				
%w/w acid		8.15					%w/w acid		9.02					%w/w acid		8.93				
%w/w FeCl ₂		8.90					%w/w FeCl ₂		8.88					%w/w FeCl ₂		8.88				
vp HCl		0.02					vp HCl		0.03					vp HCl		0.0256				
temp K		293					temp K		293					temp K		293				
vp water		17.467					vp water		17.47					vp water		17.47				
1-MR		0.948					1-MR		0.95					1-MR		0.9481				
vp sol'n		16.559					vp sol'n		16.56					vp sol'n		16.56				
Air vel		5.3498					Air vel		18.94					Air vel		28.59				
HCl loss		0.0003	per sq.ft				HCl loss		0.0010	per sq.ft				HCl loss		0.0014	per sq.ft			
water loss		0.0347	per sq.ft				water loss		0.09	per sq.ft				water loss		0.1216	per sq.ft			

Closed Tanks

E-31						
INPUT DATA			RESULTS			
Item	Units	Quantity	Item	Units	Quantity	Quantity
HCl in acid	% w/v	2.5				
Fe in acid	% w/v	4.5	Surface loss	lb/h/sqft	0.00001	0.015
Temperature	deg F	68	Total loss	lb/h	0.00002	0.034
Exhaust rate	acfm	2	Exhaust conc.	ppmv	2	
# takeoffs		1.47		% by vol		2.33
Tank width	ft	1.25		ton/yr	0.0001	
Tank length	ft	1.83				
Freeboard	ft	0.33				
Calcs for closed tank						
sg		1.1329				
%w/w acid		2.2067				
%w/w FeCl ₂		9.0081				
vp HCl		0.0011				
temp K		293				
vp water		17.467				
1-MR		0.9474				
vp sol'n		16.548				
Air vel		0.0275				
HCl loss		7E-06	per sq.ft			
water loss		0.0148	per sq.ft			

SOURCES OF DATA - HCl TANKS

Vapor pressure of pickling solutions:

Dow Chemical, from 'Development of hydrochloric acid pickling of steel in India', Akerkar, D.D. and Shahani, NML Tech Journal, Vol 12, #11, 87-92, (1970)

Specific gravity of pickling solutions:

Esco Engineering lab work

Elevation of boiling point of ferrous chloride:

International Critical Tables, McGraw Hill, 1926

Emissions from open-top tanks:

'Heat Losses from tanks, vats and kettles', Friedman, S.J., Heating and Ventilating, April 1948

Vapor pressure of water:

'Table of properties of pure compounds', DIPRR, AIChE, 1985

Assumptions for H₂Evaporation into air at 60-80 deg F, 70%RH

Essentially atmospheric pressure

Tanks are covered, with multiple exhaust points, assumed equally spaced.

Total Potential HCl Emissions (tons/yr):

Methodology

Calculation methodology by Esco Engineering, Kingsville, Ontario - March 1993

For total emissions from OPEN tanks:

Based on either air flow per square foot of tank surface or the total rate and tank dimensions

For total emissions from CLOSED tanks:

Freeboard is the distance from the liquid surface to the underside of the cover.

The # of takeoffs is the number of points at which air is exhausted from the tank - assumed equally spaced.

For strip picklers with continuous side slots, # of takeoffs = tank length/tank width

CORRECTION FACTORS - Esco Engineering, Kingsville, Ontario - March 1993

The spreadsheet calculations give maximum values for emissions based on the assumptions, i.e.

- all air passes over the whole liquid surface
- air above the liquid contains no acid vapor
- air/acid vapor/water vapor are uniformly mixed

In practice, some air will short-circuit, and only pass over some of the surface, and the mixture will not be uniform.

Also, the evaporation into the air will reduce the rate of evaporation towards the outlet end of the air flow.

Calculations on the effect of the build-up of acid and water vapors in the air show that this introduces an error of less than 10% (high) in the estimate, for typical pickling conditions.

Comparison of estimated and measured values show that the estimates are fairly good for open tanks.

Uneven air flow, and incomplete mixing, in closed picklers, have quite a significant effect in reducing rates of evaporation.

**Appendix A: Emission Calculations
Baghouse Operations**

Page 7 of 7 TSD App A

**Company Name: Imagineering, Inc.
Address City IN Zip: 1302 West Sample St., South Bend, IN 46619
FESOP: F 141-14152
Plt ID: 141-00090
Reviewer: CarrieAnn Paukowits
Date: March 12, 2001**

Four (4) blaster booths and one (1) tumble blaster

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
J-9	98.0%	0.05	2350	50.4	221	1.01	4.41

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

This is a conservative calculation based on the parameters of the common baghouse dust collector exhausting to stack H and the maximum overall control efficiency of the dust collection system.